

What is claimed is:

1. A motor comprising:

a rotor;

a stator assembly facing said rotor;

5 a motor base including;

a base section;

a bearing supporter for supporting a bearing vertically  
with respect to said base section;

a stator supporter, substantially concentric with said  
10 bearing supporter, for being mounted with said stator assembly, and

a metal terminal disposed around said bearing supporter  
and exposed from a bottom face of said base section.

2. The motor as defined in Claim 1, wherein said bearing  
15 supporter is unitarily formed with said stator supporter.

3. The motor as defined in Claim 1 further comprising a stator  
stopper protrudently provided on said base section, wherein an inner wall of  
said stator assembly is fit on an outer wall of said stator supporter, and said  
20 stator stopper closely faces a lower end face of an outer wall of said stator  
assembly in an axial direction.

4. A motor comprising:

a cup-shaped rotor including a magnet on an inner wall  
25 and a shaft at a center thereof;

a stator assembly facing said rotor;

a motor base for supporting vertically a bearing which

journals the shaft and for supporting said stator assembly concentrically with the bearing; and

a cover for surrounding an outer wall of said rotor and fixed to said motor base,

5 wherein a space between the outer wall of said rotor and an inner wall of said cover in a radial direction is set narrower than a space between an outer wall of said stator assembly and the inner wall of said magnet.

10 5. A motor comprising:

a rotor with a shaft;

a motor base for supporting vertically a bearing which journals the shaft; and

15 a cover for surrounding an outer wall of said rotor and fixed to said motor base,

20 wherein when an acceleration greater than a first acceleration (operating acceleration) and smaller than a second acceleration (maximum durable acceleration) is applied to said motor, a space between said rotor and said cover and a space between said rotor and said motor base are set such that said rotor touches at least one of said cover and said motor base.

25 6. The motor as defined in Claim 5, wherein when an acceleration greater than the first acceleration and smaller than the second acceleration is applied to said motor, a space between the outer wall of said rotor and an inner wall of the cover is set such that the outer wall of said rotor touches the inner wall of the cover in a radial direction.

7. The motor as defined in Claim 5, wherein when an acceleration greater than the first acceleration and smaller than the second acceleration is applied to said motor, a space between an end face of said rotor and an upper face of said motor base is set such that the end face of said rotor touches the upper face of said motor base in a thrust direction.

8. The motor as defined in Claim 5, wherein when an acceleration greater than the first acceleration and smaller than the second acceleration is applied to said motor, a space between an upper face of said rotor and said cover confronting the upper face of said rotor is set such that the upper face of said rotor touches said cover in a thrust direction.

9. A motor comprising:

- a rotor;
- a stator assembly facing said rotor;
- a motor base including;
  - a base section;
  - a bearing supporter for supporting a bearing vertically with respect to said base section;
  - a stator supporter, substantially concentric with said bearing supporter, for being mounted with said stator assembly, and
  - a rotor stopper protruding from said base section toward teeth of said stator assembly,
- wherein a radius of an outer wall of said rotor stopper is set one of substantially the same as and greater than that of said stator assembly.

10. A motor comprising:

a rotor including a shaft at a center thereof and an eccentric weight;

a motor base for supporting vertically a bearing which journals the shaft; and

5 a cover for covering an upper face of said rotor and fixed to said motor base,

wherein a shaft stopper, having an inner diameter greater than a diameter of the shaft, is provided on an upper face of said cover, and a part of the shaft is protruded so that the part is inserted into the shaft  
10 stopper.

11. A motor comprising:

a rotor including a rotor frame, a magnet, and an eccentric weight; and

15 a stator assembly facing said rotor;

wherein the eccentric weight is disposed in the rotor frame and clamped between a top plate of the rotor frame and the magnet, and fixed to the rotor frame.

20 12. A motor comprising:

a rotor;

a stator assembly facing said rotor;

a motor base for mounting said stator assembly; and

a mounting terminal disposed on a bottom face of said  
25 motor base,

wherein a unit area mass, derived from dividing a self weight of said motor by a total area of said mounting terminals, is not more

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than 0.1g/mm<sup>2</sup>.

13. An apparatus comprising:

a motor;

a board on which said motor is mounted; and

a driver for driving said motor,

wherein said motor including:

a rotor;

a stator assembly facing said rotor;

a motor base including;

a base section;

a bearing supporter for supporting a bearing  
vertically with respect to said base section;

a stator supporter, substantially concentric with  
said bearing supporter, for being mounted with said stator assembly, and

a metal terminal disposed around said bearing  
supporter and exposed from a bottom face of said base section.

14. An apparatus comprising:

a motor;

a board on which said motor is mounted; and

a driver for driving said motor,

wherein said motor including:

a cup-shaped rotor including a magnet on an inner  
wall and a shaft at a center thereof;

a stator assembly facing said rotor;

a motor base for supporting vertically a bearing which

journals the shaft and for supporting said stator assembly concentrically with the bearing; and

a cover for surrounding an outer wall of said rotor and fixed to said motor base,

5 wherein a space between the outer wall of said rotor and an inner wall of said cover in a radial direction is set narrower than a space between an outer wall of said stator assembly and the inner wall of said magnet.

10 15. An apparatus comprising:

a motor;

a board on which said motor is mounted; and

a driver for driving said motor,

wherein said motor including:

15 a rotor with a shaft;

a motor base for supporting vertically a bearing which journals the shaft; and

a cover for surrounding an outer wall of said rotor and fixed to said motor base,

20 wherein when an acceleration greater than a first acceleration (operating acceleration) and smaller than a second acceleration (maximum durable acceleration) is applied to said motor, a space between said rotor and said cover and a space between said rotor and said motor base are set such that said rotor touches at least one of said cover and said motor base.

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16. An apparatus comprising:

a motor;

a board on which said motor is mounted; and

a driver for driving said motor,

wherein said motor including:

a rotor;

5 a stator assembly facing said rotor;

a motor base including;

a base section;

a bearing supporter for supporting a bearing  
vertically with respect to said base section;

10 a stator supporter, substantially concentric with  
said bearing supporter, for being mounted with said stator assembly, and

a rotor stopper protruding from said base section  
toward teeth of said stator assembly,

wherein a radius of an outer wall of said rotor stopper is  
15 set one of substantially the same as and greater than that of said stator  
assembly.

17. An apparatus comprising:

a motor;

20 a board on which said motor is mounted; and

a driver for driving said motor,

wherein said motor including:

a rotor including a shaft at a center thereof and an  
eccentric weight;

25 a motor base for supporting vertically a bearing which  
journals the shaft; and

a cover for covering an upper face of said rotor and

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fixed to said motor base,

wherein a shaft stopper, having an inner diameter greater than a diameter of the shaft, is provided on an upper face of said cover, and a part of the shaft is protruded so that the part is inserted into the shaft stopper.

18. An apparatus comprising:

a motor;

a board on which said motor is mounted; and

a driver for driving said motor,

wherein said motor including:

a rotor including a rotor frame, a magnet, and an eccentric weight; and

a stator assembly facing said rotor;

wherein the eccentric weight is disposed in the rotor frame and clamped between a top plate of the rotor frame and the magnet, and fixed to the rotor frame.

19. An apparatus comprising:

a motor;

a board on which said motor is mounted; and

a driver for driving said motor,

wherein said motor including:

a rotor;

a stator assembly facing said rotor;

a motor base for mounting said stator assembly; and

a mounting terminal disposed on a bottom face of



said motor base,

wherein a unit area mass, derived from dividing a self weight of said motor by a total area of said mounting terminals, is not more than  $0.1\text{g/mm}^2$ .